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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,243

03/30/2004

Eric T. King

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06/06/2008

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EXAMINER

BOCURE, TESFALDET

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

06/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/813,243	Applicant(s) KING ET AL.	
	Examiner Tesfaldet Bocure	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 and 51-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-48 is/are allowed.
- 6) ☐ Claim(s) 49 and 51-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-49 and 51-55 are pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 49, 52 and 54-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Sorensen (US patent number 4,464,771).

Sorensen teaches a phase lock loop circuit (fig. 2) comprising a transition detector (2) for detecting the transition of the received signal having a clock information embedded with comprising: a counter for counting the number of transitions so that to increase or decrease the phase/frequency of the oscillator (5) depending on the phase or frequency error (see fig. 3 and corresponding text in the patent) of the oscillator phase/frequency compared to that of the received clock signal; wherein if the counted value shows to have no transition (claimed when the transition compared is less than the threshold in claims 49,52 and 52, see abstract and col. 1, lines 64 through col. Line 34) inhibiting the oscillator as in claims 49, 52 and 54. See gate 15 in figure 3 for inhibiting the oscillator if there is no transition counted.

The phase lock loop having a phase detector for detecting and correcting the phase and frequency error by comparing the received clock to that of the oscillator as in claim 55.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 51 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorensen (US patent number 4,464,771) in view of Applicant's Own Admitted Prior Art, AOAPA hereinafter (figures 1-3).

6. Sorensen teaches the claimed subject matter in claims 49 and 52 in which claims 52 and 53 respectively depends on as indicated above.

Further Sorensen also teaches that the phase and frequency of the oscillator is increased or decreased based on the phase comparison between the received clock and that of the oscillator (see col. 1, line 63 through col. 2, line 35), however fails to teach that there is a quadrant information associated with the received transitions as in claims 51 and 53.

AOAPA teaches a phase frequency correction circuit (see figure 3 and corresponding text in the current application) comprising for generating quadrant

information (see fig. 20 corresponding to the detected transition (see fig.1) as in claims 52 and 53.

Therefore, it would have been obvious to one of an ordinary skill in the art to increase or decrease the phase or frequency error of the internally generated clock from the oscillator according the quadrant information of the received transition at the time the invention was made.

Response to Amendment

7. In response to Applicant's Agreement that:

--- Amended **claim** 49 recites counting a number of data transitions in a received data stream that occur over a number of cycles of an oscillator to generate a count value; and inhibiting adjustment of the oscillator if the count value of the number of data transitions in the received data stream is below a predetermined threshold. Sorenson only teaches detecting if a transition of the data occurs after the clock transition and if not, utilizes NAND gate 15 to prevent adjustment of the oscillator. Col. 4, lines 26-40. Sorenson does not count the transitions that occur over a number of cycles of the oscillator as claimed. Accordingly, applicants submit that claim 49 distinguishes over Sorenson and the other references of record. Independent claims 52 and 54 have also been amended to better distinguish over Sorenson. Similar arguments apply to independent claim 52 (counter coupled to count a number of data transitions of a received data stream that occur over multiple cycles of an oscillator used to generate a recovered clock from the received data stream and generate a count value indicative thereof) and to claim 54 (means for counting a number of data transitions in a received data stream that occur over multiple cycles of an oscillator used to generate a recovered clock from the received data stream). Accordingly, applicants submit that claims 52 and 54, and all claims dependent thereon, distinguish over the references of record.

Examiner kindly disagrees to the Applicant's assertion that the data occurs after the transition. First Examiner would like to bring Applicant's attention to refer to figure 1,

where the transition of the received data is compared with respect to the clock signal.

Second, the delay element which generates an input to the NAND 15 to enable or disable the oscillation through the charge pump and integrator, stores the received transition cycles until it is determined whether a data transition arrives during the clock signal. See col. 4, lines 26-40.

Therefore, the phase locking circuit of Sorensen clearly shows that the enabling and inhibiting of the oscillator is according to the transitions of the received data and that of the clock signal from the oscillator.

Allowable Subject Matter

8. Claims 1-48 are allowed.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (571) 272-3015. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/813,243
Art Unit: 2611

Page 7

/Tesfaldet Bocure/
Primary Examiner, Art Unit 2611

/T. B./
Primary Examiner, Art Unit 2611